SIEMENS

ARCADIS Orbic

SP

Maintenance Protocol

System

Customer:	
Address:	
Department:	
Room:	
Contact person:	
Telephone:	
Cust. specific no.:	
Cust. no.:	
Date.:	

The instructions SPR2-320.831.02.01.02 are required for this protocol

Print No.: SPR2-320.832.02.01.02
Replaces: n.a.

English
Doc. Gen. Date: 08.04

SIEMENS Office:	
Address:	
Region:	
Country:	
Contact person:	
Tel.:	
CSE in charge:	
Tel.:	

Remarks Regarding the Protocol:

The protocol is valid as proof of quality for **one** check that must be performed on the system / component in one year.

The check must be performed in the specified intervals.

The results of the check are entered in this protocol.

The chapter numbers in front of the checkpoints indicate the corresponding chapters in the particular instructions (see cover page).

The protocol must be completely filled out by the Customer Service Engineer, i.e.:

- All boxes must be filled out. If a box does not apply to the system or if no entry needs to be made, check the “n.a.“ box.
- Enter the customer number (Cust. No.:) and the date of the check in the header of each page so that each page can be allocated to a customer and to a check date.
- If there are complaints, the IVKs for the component about which a complaint has been made as well as the type of complaint must be entered in the “Open Points“ table provided for this. Correction of these open points also must be documented in this table with the date and a signature. If there are no open points, check “No“ and document this with the date and a signature.
- If movable components (also test phantoms that are part of the system) that can be used in different systems are used for the check, they must be entered in the “Movable Components“ table provided for this.
- The measurement values for the measurements that must be performed during the check must also be entered in the open spaces / tables provided for them.
- After completing the check, Page 3 of this protocol must be filled out and signed.

Further Processing and Archiving of the Protocol

The protocol is a document and thus must be archived. After completing the test, it must be filed in the corresponding register in the “System Owner Manual“ binder. If needed, a copy can be handed to the customer.

System:	
Serial No.:	
Software Version:	
Number of the Service Contract:	
Type of Maintenance:	

Evaluating the Condition of the System / Component

The system has no deficiencies. The image quality test resulted in no differences from required reference values.	☐
The system / component has slight deficiencies that have no affect on continued operation of the system. However they should be corrected preventively. The image quality test resulted in no differences from required reference values.	☐
The system / component has serious deficiencies. For safety reasons, continued operation of the system is permitted only after successfully correcting the deficiencies.	☐

After completing all work steps, an evaluation was performed.		
Date:	**Name of Technician:**	**Signature:**

The operator or a person assigned for this has taken note of this evaluation. (if national regulations require this)		
Date:	**Name:**	**Signature:**

Explanation of Abbreviations in the Protocol

Abbrev.	Explanation		Abbrev.	Explanation
SI	Safety Inspection		PMF	Preventive Maintenance, Operating Value Check, Function Check
SIE	Electrical Safety Inspection		Q	System Quality, Image Quality
SIM	Mechanical Safety Inspection		QIQ	Image Quality
PM	Preventive Maintenance		QSQ	System Quality Check
PMP	Periodic Preventive Maintenance		SW	Software Maintenance
PMA	Preventive Maintenance Adjustments		CSE	Customer Service Engineer

Activities performed

Only additional activities that are not described in the instructions for the system / component need to be listed.

	Date:		
Activities performed:	OK	not OK	n.a.
	☐	☐	☐
	☐	☐	☐
	☐	☐	☐
	☐	☐	☐
	☐	☐	☐

Open Points

☐ Yes ☐ No Date / Signature: _____

If “Yes“, enter the component with the IVK and the open point (only the number) in the table. After completing maintenance, record this in the table.

IVK	Component	Open Points	Completed	
			Date	**Signature**

Measuring Devices

If the measurement devices are sensed electronically, for example with a “scout”, entry of the measuring devices in the table can be skipped.

Measuring devices electronically sensed?

☐ Yes ☐ No Date / Signature:_____

Measuring Devices	Type	Serial No.	Date Used	Next Calibration Due

Movable Components

☐ Yes ☐ No Date / Signature:_____

If “Yes“, enter the movable component with which the check was performed along with the with the Serial No. in the table.

Movable components (also test phantoms that are part of the system) are parts that can be used on different systems).

Component	Serial No.

OK not OK | n.a.

1 General information

1.1 Requirements

1.2 Required documents

1.2.1 Systems equipped with a laser light localizer

1.2.2 Systems equipped with an I.I. laser light localizer

1.3 Required tools, measurement and auxiliary devices

1.4 Spare parts which may be needed

1.5 Emphasized texts

1.6 Safety information and protective measures

1.7 Explanation of abbreviations

1.8 Maintenance interval

1.8.1 System maintenance interval

1.8.2 Maintenance interval for 3D reconstruction in combination with a navigation system

1.9 Technical Safety Checks (TSC)

2 Inspection of exterior and surroundings

2.1 Inspection of exterior

PMP	Damage	☐☐☐

2.2 Inspection of surroundings

2.2.1 Power outlets

SIE	Damage	☐☐☐
SIE	Line voltage	☐☐☐
SIE	Internal line impedance	☐☐☐

3 Safety inspection

3.1 Mechanical safety

SIM	Cover panels	☐☐☐
SIM	Cable deflectors	☐☐☐
SIM	I.I. laser light localizer mechanics (if present)	☐☐☐
SIM	I.I. laser light localizer function (if present)	☐☐☐
SIM	Laser light localizer mechanics (if present)	☐☐☐

		OK	not OK	n.a.
SIM	Laser light localizer function (if present)	☐	☐	☐
SIM	Navigation system (if present)	☐	☐	☐
SIM	Foot brake	☐	☐	☐
SIM	Brakes	☐	☐	☐
SIM	C-arm	☐	☐	☐
SIM	Wheels and castors	☐	☐	☐
SIM	Lifting column	☐	☐	☐
SIM	Emergency stop switch	☐	☐	☐
SIM	Warning signs	☐	☐	☐
SIM	ID labels	☐	☐	☐
SIM	TFT monitor(s)	☐	☐	☐

3.2 Electrical safety

SIE	Cables and plugs	☐	☐	☐
SIE	Fluoroscopy timer	☐	☐	☐
SIE	Acoustic warning signal	☐	☐	☐
SIE	Compulsory radiation switch off	☐	☐	☐
SIE	Check the radiation release switch	☐	☐	☐
SIE	Dose rate	☐	☐	☐
SIE	Radiation indicator	☐	☐	☐
SIE	Iris collimator	☐	☐	☐
SIE	Voltage discharge rubber	☐	☐	☐
SIE	Ground wire test	☐	☐	☐
SIE	Equivalent leakage current	☐	☐	☐
SIE	3D reconstruction (if present)	☐	☐	☐
SIE	3D reconstruction with navigation system (if present)	☐	☐	☐
SIE	Voltage discharge rubber	☐	☐	☐
SIE	Ground wire test	☐	☐	☐
SIE	Equivalent leakage current	☐	☐	☐

4 Maintenance, operating value/functional inspection

4.1 Maintenance

PMP	Cleaning the system	☐	☐	☐
PMP	System ventilation	☐	☐	☐

4.2 Operating value inspection

SIE	Dose rate	☐	☐	☐
PMF	Event log	☐	☐	☐

4.3 Functional inspection

SIE	TFT monitor	☐	☐	☐
SIE	Area dose product measuring unit (if present)	☐	☐	☐
PMF	Laser camera connection (if present)	☐	☐	☐

		OK	not OK	n.a.
PMF	Check the operating function.	☐	☐	☐
PMF	Monitor display of the iris collimator aperture	☐	☐	☐
PMF	PMF Monitor display of the slot diaphragm positions	☐	☐	☐
PMF	Battery replacement in the UPS	☐	☐	☐

5 Final result/quality inspection and general maintenance

SIE	Image quality (IQ) quick test	☐	☐	☐
PMP	General maintenance	☐	☐	☐

5.1 Final work steps

SIE	Ground wire test	☐	☐	☐
SIE	Ground wire resistance	☐	☐	☐
SIE	Leakage current	☐	☐	☐